



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,575	01/28/2002	Shane Y. Hong	AP33951	4314
21003	7590	11/37/2003	EXAMINER	
BAKER & BOTTS 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			LOPEZ, CARLOS N	
		ART UNIT	PAPER NUMBER	
		1731		

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/058,575	HONG, SHANE Y.	
	Examiner Carlos Lopez	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 17-35 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) 11-17 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 24 June 2002 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a)  The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) <input type="checkbox"/> Other: _____ .

## DETAILED ACTION

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-17, drawn to method of removing scratches from a planar panel or translucent or transparent material, classified in class 65, subclass 28.
- II. Claims 18-38, drawn to apparatus for removing scratches, classified in class 432, subclass 214.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such as fire polishing of glass bottles, non-planar surfaces.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Jeffrey Sullivan on 10/21/03 a provisional election was made with traverse to prosecute the invention of group I, claims 1-17. Affirmation of this election must be made by applicant in replying to this Office action. Claims 18-38 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "the axis of movement" lacks antecedent basis.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Michalik et al (US 3,259,480). Michalik discloses a method for removing surface defects from a glass sheet. The scratches from the top surface of glass ribbon 14 are removed by heating the top surface of the glass to a temperature that the glass flows (Col. 2, lines48ff). While the top surface is being treated, the bottom surface is maintained at a temperature, which the glass does not flow. The top surface of the glass inherently smoothes in order to remove the scratches on the top surface. The claimed "controllably heating" inherently occurs in order to reach the flow temperature of the top surface of the glass and to maintain a temperature differential of 500 of 600 degrees Fahrenheit between the top surface and lower surface of the glass ribbon 14 (See Michalik's claims 2-3).

As for claim 2, Michalik teaches that that the heat source may heat the glass with elongated nozzles to thus provide streams of heating source (Col. 10, lines 60ff), which reads on the claimed linear heating source.

Claims 1-2 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Deeg et al (US 3,811,857). Deeg discloses a method for fire polishing a glass sheet. Deeg provides a heat source in order to remove scratches from the surface of a glass (Col. 2, lines30ff). The heat source melts a thin layer of the surface of the glass in order to smooth the surface (Col. 2,lines 19ff). As noted by Deeg the temperature of the heat source would depend on the deepest pit or fissure on the surface of the glass (Col. 2 lines 28-33), thus its is deemed that the temperature of the heat source is controlled.

As for claim 2, the heat source deemed as apparatus 11 has a substantially linear tubing 17 as shown in figure 1.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deeg et al (US 3,811,857) as applied to claim 2 above and in further view of Menear (US 3,534,272). Deeg in distinguishing his invention over the prior art, discloses that the prior art uses flame torches such as oxygen/hydrogen flame and direct current plasma torches for fire-polishing glass (Col. 1, lines 36-38). Deeg is silent disclosing how the prior art uses torches to fire polish glass. However, as taught by Menear, using downwardly projecting burners that are placed in oscillatory motion in a horizontal plane may be used to carry out fire polishing of a glass (Col 6, lines 60ff). Thus at the time the invention was made it would have been obvious to a person of ordinary skill in the art, absent any indication by Deeg, to move its fire-polishing burners as conventionally done in the art which as shown by Menear to have oscillatory motion in a horizontal plane.

As for claims 6-7, the width of the flame would depend on the desired working area to treat the glass and at the minimum have a width of 1mm.

Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deeg et al (US 3,811,857) in view of Menear (US 3,534,272) as applied to claims 2-3 and 6-7 above and in further view of Futerko (US 3,876,149). Neither Menear nor Deeg disclose the structural features of the fire polishing burners. However, Futerko discloses diffusion torches as shown in figure 7 having both a multiplicity of tubes and a channel having a multiplicity of orifices. Additionally, the torches in as shown in figures 14-17 and 18-21, which are a tubular form of burners shown in figure 7 are useful for fire-polishing glass tubes (Bridging Paragraph of Col 15-16). Since the tubular form of the torches shown in figure 7 may be used for fire-polishing, it would be obvious to a person of ordinary skill in the art at the time the invention was made that the torches as shown in figure 7 having both a multiplicity of tubes and a channel having a multiplicity of orifices would also be expected to be used for fire polishing flat glass absent any indication by Menear or Deeg.

***Allowable Subject Matter***

Claims 11-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The cited prior art fails to disclose or reasonably suggest the planar panel and the slot for burning premixed fuel mixture are substantially vertical and the step of controllably heating includes controlling the distance of between the burner nozzle and

the top surface of the planar panel and controlling the fuel to oxygen mixing ratio as recited in claim 11.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is (703) 605-1174 and after Dec. 18 2003 calls should be directed to (571) 272-1193. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (703) 308-1164 and after Dec. 18 2003 calls should be directed to (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

C.L.

  
STEVEN P. GRIFFIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700